

Claim Amendments

Please amend claims 1-13 and 18-32 as follows:

1. (currently amended) ~~A client-server collaboration method for enabling packet transfer delay variation compensation in a multimedia streaming system, in which a signal indicative of pre-decoding buffering parameters is provided by a streaming server to a streaming client, and wherein the pre-decoding buffering parameters indicated by the server are chosen such as to ensure that the client is able to play out a packet stream without client buffer violation if the packet stream is transmitted over a constant delay, reliable channel, said method comprising:~~

determining client's chosen ~~pre-decoding~~ pre-decoder buffering parameters at a streaming client of a multimedia streaming network, wherein the multimedia streaming network has a streaming server to transmit to the streaming client a packet stream over a constant delay channel, the server adapted to provide to the streaming client a signal indicative of pre-decoder buffering parameters, and wherein the pre-decoder buffering parameters are determined at the server to ensure that the streaming client is able to play out the packet stream without client buffer violation; and

providing information indicative of the client's chosen ~~pre-decoding~~ pre-decoder buffering parameters to the streaming server, so that ~~[[the]]~~ client's jitter buffering capabilities can be determined based on a difference between the ~~pre-decoding client's~~ chosen pre-decoder buffering parameters provided to the streaming server and the pre-decoder pre-decoding buffering parameters provided by the streaming server.

2. (currently amended) A method according to claim 1, wherein the pre-decoder buffer parameters provided by the streaming server to the streaming client are chosen based on ~~[[the]]~~ variable bit-rate characteristics of the transmitted packet stream and the buffering applied by the streaming server.

3. (currently amended) A method according to claim 1, wherein the streaming client ~~provides-~~ is adapted to provide the information indicative of the client's chosen pre-decoder buffering parameters to the streaming server as soon as the streaming client

determines the pre-decoder ~~pre-decoding~~ buffering parameters chosen to be used for a particular streaming session.

4. (currently amended) A method according to claim 1, wherein the streaming client ~~provides~~ is adapted to provide the information indicative of the client's chosen pre-decoder buffering parameters to the streaming server ~~when starting-~~ at beginning of a new streaming session.

5. (currently amended) A method according to any of claim 1, wherein the streaming client is adapted to dynamically change its pre-decoder buffering parameters during a streaming session, said method further comprising

providing further information indicative of the changed client's ~~changed~~ pre-decoder buffering parameters to the streaming server during the streaming session.

6. (currently amended) A method according claim 1, further comprising  
applying in the streaming server rate-control and/or rate shaping algorithms that utilize the information indicative of the client's chosen ~~pre-decoding~~ pre-decoder buffering parameters to compensate for packet transfer delay and channel rate variations.

7. (currently amended) A method according to claim 1, wherein the streaming server is adapted to optionally consider ~~considers~~ the information indicative of the client's chosen pre-decoder buffering parameters in rate control and/ or rate shaping.

8. (currently amended) A method according to claim 1, wherein the information indicative of the client's chosen pre-decoder buffering parameters includes at least one of the following:

information regarding a size of the client's pre-decoder buffer,  
information regarding a pre-decoder buffering period, and  
information regarding a post-decoder buffering time.

9. (currently amended) A method according to claim 1, wherein the streaming client ~~provides~~ is adapted to provide the information indicative of the client's chosen ~~pre-decoding pre-decoder~~ buffering parameters to the streaming server in a Real-Time Streaming Protocol (RTSP) ~~an RTSP OPTIONS~~ request message.
10. (currently amended) A method according to claim ~~[[1]]~~ 9, wherein ~~the streaming client provides~~ the information indicative of the client's chosen ~~pre-decoding pre-decoder~~ buffering parameters is provided to the streaming server in an RTSP PLAY request message.
11. (currently amended) A method according to claim ~~[[1]]~~ 9, wherein ~~the streaming client provides~~ the information indicative of the client's chosen ~~pre-decoding pre-decoder~~ buffering parameters is provided to the streaming server in an RTSP PING request message.
12. (currently amended) A method according to claim 1, further comprising  
determining in the streaming client whether the streaming server supports the signaling of ~~client~~ the client's pre-decoder buffering parameters.
13. (currently amended) A streaming client device ~~including at least one buffer~~, comprising:  
at least one buffer;  
means for receiving a packet stream from a streaming server and storing the packet stream in ~~the~~ said at least one buffer;  
means for playing-out the packet stream; and  
means for providing information indicative of the client's chosen pre-decoder buffering parameters to the streaming server.
14. (original) A streaming client device according to claim 13, wherein said at least one buffer comprises a pre-decoder buffer and a delay jitter buffer.

15. (original) A streaming client device according to claim 13, wherein said at least one buffer comprises a pre-decoder buffer, a delay jitter buffer and a post-decoder buffer.
16. (original) A streaming client device according to claim 14, wherein the pre-decoder buffer and delay jitter buffer are integrated as a single unit.
17. (original) A streaming client device according to claim 15, wherein the pre-decoder buffer and the delay jitter buffer are integrated as a single unit.
18. (currently amended) A streaming client device according to claim 13, further comprising  
means for receiving an indication of pre-decoder buffering parameters determined  
~~chosen~~ by the streaming server.
19. (currently amended) A streaming client device according to claim 13, wherein ~~the client device provides~~ the information indicative of the client's chosen pre-decoder buffering parameters is provided to the streaming server as soon as the streaming client determines the buffering parameters chosen to be used for a particular streaming session.
20. (currently amended) A streaming client device according to claim 13, wherein ~~the client device provides~~ the information indicative of the client's chosen pre-decoder buffering parameters is provided to the streaming server ~~when starting at beginning of a~~ new streaming session.
21. (currently amended) A streaming client device according claim 13, wherein the ~~client device is adapted to change its~~ client's chosen pre-decoder buffering parameters are dynamically changed during a streaming session, and wherein said providing means is adapted to provide further ~~providing~~ information indicative of the changed client's ~~changed~~ pre-decoder buffering parameters to the streaming server during the streaming session.

22. (currently amended) A streaming client device according to claim 13, wherein the information indicative of the client's chosen pre-decoder buffering parameters includes at least one of the following:

information regarding a size of the client's pre-decoder buffer,  
information regarding a pre-decoder buffering period, and  
information regarding a post-decoder buffering time.

23. (currently amended) A streaming client device according to claim 13, wherein ~~said providing means provides~~ the information indicative of the client's chosen pre-decoder buffering parameters is provided to the streaming server in ~~an RTSP OPTIONS~~ a Real-Time Streaming Protocol (RTSP) request message.

24. (currently amended) A streaming client device according to claim ~~[[13]]~~ 23, wherein ~~said providing means provides~~ the information indicative of the client's chosen pre-decoder buffering parameters is provided to the streaming server in an RTSP PLAY request message.

25. (currently amended) A streaming client device according claim ~~[[13]]~~ 23, wherein ~~said providing means provides~~ the information indicative of the client's chosen pre-decoder buffering parameters is provided to the streaming server in an RTSP PING request message.

26. (currently amended) A streaming client device according to claim 13, ~~wherein the client device is~~ adapted to determine whether the streaming server supports the signaling of ~~client~~ the client's chosen pre-decoder buffering parameters.

27. (currently amended) A streaming server device comprising:

means for transmitting a packet stream to a streaming client device, and  
means for receiving information indicative of chosen pre-decoder buffering parameters of the streaming client device.

28. (currently amended) A streaming server device according to claim 27, wherein the packet stream is transmitted over a constant delay channel and wherein the streaming server device is adapted to provide a signal indicative of recommended pre-decoding pre-decoder buffering parameters to the streaming client, wherein said pre-decoding pre-decoder buffering parameters indicated are determined by the server ~~are chosen such so~~ as to ensure that the streaming client device is able to play out the packet stream without client buffer violation if the packet stream is transmitted over a constant delay, reliable channel.

29. (currently amended) A streaming server device according to claim 27, adapted to apply rate-control and/or rate shaping algorithms that utilize the information indicative of the client's chosen pre-decoder buffering parameters to compensate for packet transfer delay and channel rate variations occurring during transmission of said packet stream from the streaming server device to the streaming client device.

30. (currently amended) A streaming server device according to claim 27, adapted to optionally consider the information indicative of the client's chosen pre-decoder buffering parameters in rate control and/or rate shaping.

31. (currently amended) A streaming server device according to claim 27, wherein the information indicative of the client's pre-decoder buffering parameters received by the server includes at least one of the following:

- information regarding a size of the client's pre-decoder buffer,
- information regarding a pre-decoder buffering period, and
- information regarding a post-decoder buffering time.

32. (currently amended) A ~~data-streaming~~ system comprising:

- a streaming client device, and

- a streaming server device, wherein the streaming client device comprises:

- means for playing-out a packet stream provided by the streaming server device; and

means for providing information indicative of the client's chosen pre-decoder buffering parameters to the streaming server device, and wherein the streaming server device comprises

means for transmitting the packet stream to the streaming client device,  
and

means for receiving the information indicative of the client's chosen pre-decoder buffering parameters.